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Remarks

In the Office Action, the Examiner has objected to the specification due to an informality. The Examiner has objected to claims 4 and 6 due to informalities. The Examiner has rejected claim 7 under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner has rejected claims 1-11 under the judicially created doctrine of double patenting as being obvious over the claims of U.S. Patent No. 7,013,998. The Examiner has rejected claims 1-4, 6, 8 and 11 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,524,718 to Kirk et al. in view of "Industrial Materials and their Uses" by Ciullo ("Ciullo") and the Zinc Corporation of America's MSDS for Zinc Oxide ("ZCA"). The Examiner has rejected claims 1, 3, 4 and 5 under 35 U.S.C. §102(b) as being anticipated by U.S. patent No. 4,851,068 to Uyehara in view of Ciullo. The Examiner has rejected claims 1-5 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,459,202 to Martinez et al in view of Ciullo. The Examiner has rejected claims 1-4 and 6 under 35 U.S.C. §102(b) as being anticipated by U.S. Reissue Patent No. Re 36,452 to Upton in view of Ciullo. The Examiner has rejected claims 1-3, 5 and 8 under 35 U.S.C. §102(b) as being anticipated by U.S. patent No. 5,962,553 to Ellsworth. The Examiner has rejected claims 1, 3-5 and 7 under 35 U.S.C. §102(b) as being anticipated by the paper "Oilfield Engineering with Polymers Conference" by Arrigoni et al. ("Arrigoni"). The Examiner has rejected claims 1, 3, 4 and 6-9 under 35 U.S.C.

§102(b) as anticipated by U.S. Patent Application Publication 2002/0161119 in the name of Obrecht et al. The Examiner has rejected claims 1-3 and 10 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,134,170 to Ohata et al.

Claims 1-11 were presented for examination. Claims 1-11 have been cancelled by way of the present response and claims 12-38 were previously cancelled. New claims 39-59 have been presented, of which, claims 39, 46 and 54 are in independent form. Favorable consideration of the present Response as currently constituted is respectfully requested.

Objection to the Specification

The Examiner has objected to the specification due to an informality. The applicant has amended paragraph [0049] as suggested by the Examiner. Accordingly, applicant believes the basis for this objection has been overcome.

Claim Objections

The Examiner has objected to claims 4 and 6 due to informalities. The applicant has cancelled claims 4 and 6 and believes the objections to these claims is now moot. Applicant notes, however, that in new claims 41 and 48 the chemical names have been used for the selected materials.

Rejections Under 35 U.S.C. §112

The Examiner has rejected claim 7 under 35 U.S.C. §112, second paragraph, as being indefinite. The applicant has cancelled claim 7 and believes the rejection is now moot. Applicant notes, however, that in new claims 42, 50 and 56 the term "length" is used to describe the dimension of interest.

Double Patenting Rejection

The Examiner has rejected claims 1-11 under the judicially created doctrine of double patenting as being obvious over the claims of U.S. Patent No. 7,013,998. The applicant has cancelled claims 1-11 and believes the double patenting is now moot.

Rejections Under 35 U.S.C. §102(b)

The Examiner has rejected claims 1-4, 6, 8 and 11 under 35 U.S.C. §102(b) as being anticipated by Kirk in view of Ciullo and ZCA. The applicant has cancelled claims 1-4, 6, 8 and 11 and believes this rejection is now moot.

The Examiner has rejected claims 1, 3, 4 and 5 under 35 U.S.C. §102(b) as being anticipated by Uyehara in view of Ciullo. The applicant has cancelled claims 1, 3, 4 and 5 and believes this rejection is now moot.

The Examiner has rejected claims 1-5 under 35 U.S.C. §102(b) as being anticipated by Martinez in view of Ciullo. The applicant has cancelled claims 1-5 and believes this rejection is now moot.

The Examiner has rejected claims 1-4 and 6 under 35 U.S.C. §102(b) as being anticipated by Upton in view of Ciullo. The applicant has cancelled claims 1-4 and 6 and believes this rejection is now moot.

The Examiner has rejected claims 1-3, 5 and 8 under 35 U.S.C. §102(b) as being anticipated by Ellsworth. The applicant has cancelled claims 1-3, 5 and 8 and believes this rejection is now moot.

The Examiner has rejected claims 1, 3-5 and 7 under 35 U.S.C. §102(b) as being anticipated by Arrigoni. The applicant has cancelled claims 1, 3-5 and 7 and believes this rejection is now moot.

The Examiner has rejected claims 1, 3, 4 and 6-9 under 35 U.S.C. §102(b) as anticipated by Obrecht. The applicant has cancelled claims 1, 3, 4 and 6-9 and believes this rejection is now moot.

The Examiner has rejected claims 1-3 and 10 under 35 U.S.C. §102(b) as being anticipated by Ohata. The applicant has cancelled claims 1-3 and 10 and believes this rejection is now moot.

New Claims

The applicant has presented new claims 39-59 that applicant believes are patentably distinguishable over the cited prior art. Specifically, claim 39 recites a nanocomposite material for use as a downhole seal element comprising an elastomer host material and

either carbon nanotubes or carbon nanofibers integrated therewith. None of the cited prior art teaches such as nanocomposite material. Accordingly, applicant believes that claim 39 as well as claims 40-45 that depend therefrom should be allowed.

Claim 46 recites a nanocomposite material for use as a downhole seal element comprising an elastomer host material with a nanoclay integrated therewith. None of the cited prior art teaches such as nanocomposite material. Accordingly, applicant believes that claim 46 as well as claims 47-53 that depend therefrom should be allowed.

Claim 54 recites a nanocomposite material for use as a downhole seal element comprising a thermoplastic host material and either carbon nanotubes or carbon nanofibers integrated therewith. None of the cited prior art teaches such as nanocomposite material. Accordingly, applicant believes that claim 54 as well as claims 55-59 that depend therefrom should be allowed.

Fee Statement

Compared to the initial filing, in the present Response, the number of independent claims has remained the same and the total number of claims has been reduced. Applicant is filing herewith a petition for a two-month extension of time and form PTO-2038 authorizing payment of the petition fee in the amount of \$450.00. Applicant believes no additional fees are due for the filing of this Response. If any additional fees are due or overpayment have

been made, please charge or credit, our Deposit Account No. 03-1130.

Conclusion

In view of the foregoing, the Examiner is respectfully requested to examine and allow claims 39-59 presented for consideration herein. Accordingly, a favorable action in the form of an early notice of allowance is respectfully requested. The Examiner is requested to call the undersigned for any reason that would advance the instant application to issue.

Dated this 15th day of August, 2006.

Respectfully submitted:



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